

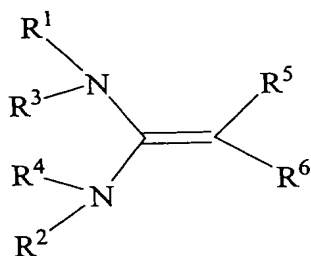
### Claim Amendments

This listing of claims will replace all prior versions, and listings, of claims in the application.

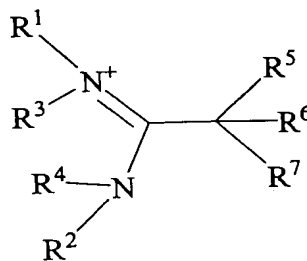
### Listing of Claims

Claim 1. (Currently Amended) A process for preparing metal complexes of metals of groups 6 to 10 of the Periodic Table of the Elements, comprising:

reacting a compound of a metal of groups 6 to 10 of the Periodic Table of the Elements with a compound ~~compounds~~ of the formula II and/or III



(II)



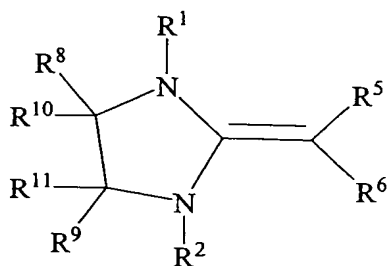
(III)

wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> are the same or different and each ~~are~~ is a linear, branched, substituted or unsubstituted, cyclic or alicyclic alkyl ~~groups group~~ having from 1 to 24 carbon atoms; a substituted or unsubstituted, mono- or polycyclic aryl ~~groups group~~ having from 6 to 24 carbon atoms; a mono- or polycyclic, substituted or unsubstituted ~~heterocycles~~ heterocycle having from 2 to 24 carbon atoms; a heteroatom selected from the group consisting of N, O and S, and R<sup>3</sup> ~~[[,]]~~ and R<sup>4</sup> ~~may have optionally are linked by~~ are optionally linked by a covalent bond;

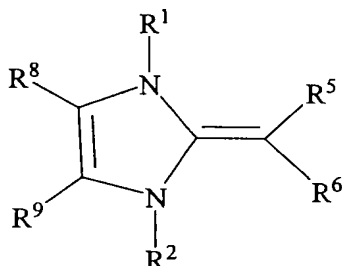
R<sup>5</sup>, R<sup>6</sup> ~~[[,]]~~ and R<sup>7</sup> ~~may be~~ are optionally the same or different and ~~may each be~~ is H, a linear, branched, substituted or unsubstituted, cyclic or alicyclic alkyl ~~groups group~~ having from 1 to 24 carbon atoms; a substituted or unsubstituted, mono- or polycyclic aryl ~~groups~~

group having from 6 to 24 carbon atoms, with the proviso that the  $R^7$  substituent is not H, and  
with the proviso that when groups  $R^3$  and  $R^4$  are bonded together to form an imidazole ring,  
the metal of the metal compound reactant can not be a member of group 10, thereby forming  
 a metal complex.

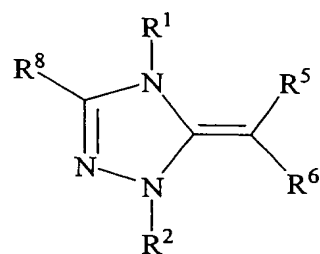
Claim 2. (Currently Amended) The process as claimed in claim 1, wherein the  
 compounds of ~~the~~ formulae II or III ~~used~~ are compounds within the scope of formulae (V) to  
 (X)



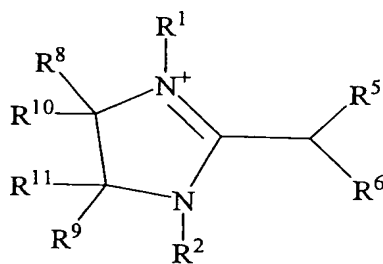
V



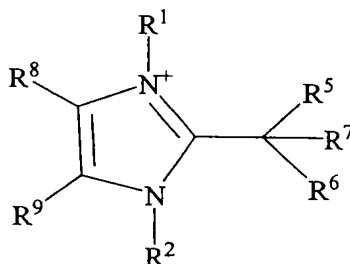
VI



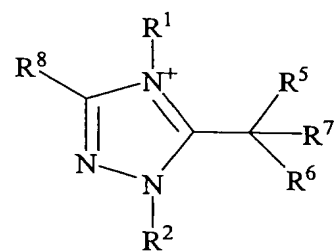
VII



VIII



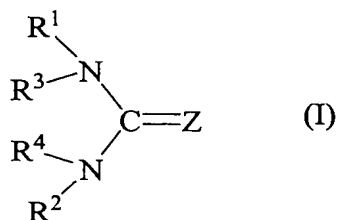
IX



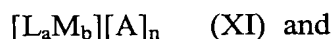
X

~~where~~ wherein  $R^1$ ,  $R^2$ ,  $R^5$ ,  $R^6$ [[,]] and  $R^7$  are each as defined above and  $R^8$ ,  $R^9$ ,  $R^{10}$ [[,]]  
 and  $R^{11}$  are the same or different and are each H or have one of the definitions of  $R^1$ .

Claim 3. (Currently Amended) The process as claimed in claim 1, wherein the  
product of the reaction is a metal complex of ~~the general~~ formula (I)



are prepared where in which [Z] is a metal complex fragment of the ~~general~~ formula



M is[[:]] a metal of groups 6 to 10 of the Periodic Table of the Elements;

L is[[:]] one or more identical or different mono- or polydentate, charged or uncharged ligands;

A is[[:]] a singly charged anion or the chemical equivalent of a multiply charged anion;

b is[[:]] an integer of from 1 to 3;

a is[[:]] an integer of from 0 to 5 x b;

n is[[:]] an integer of from 0 to 6;

and  $R^1$ ,  $R^2$ ,  $R^3$ [[:]] and  $R^4$  are each defined as specified.

Claim 4. (Currently Amended) The process as claimed in claim 3, wherein

L in ~~the general~~ formula (XI) is hydrogen, the hydrogen ion, halogens, halogen ions, pseudohalides, carboxylate ions, sulfonate ions, amide radicals, alkyl groups, alkylaryl groups, aryl groups, heteroaryl groups, alkenyl groups, ~~alkenyl groups~~, alkoxide radicals, nitriles, isonitriles, mono- or diolefins, alkynes,  $\pi$ -aromatic radicals, cyclopentadienyl, indenyl, phosphines, phosphates, phosphinites, phosphonites, phosphorus aromatics, acetylacetonate, carbon monoxide, nitrogen monoxide or carbene ligands, where the alkyl groups contain from 1 to 24 carbon atoms, the alkenyl and heteroaryl groups from 2 to 24

carbon atoms, and the aryl and alkylaryl groups from 5 to 24[[,]] carbon atoms, and ~~may~~  
optionally are each ~~be~~ substituted or unsubstituted.

Claim 5. (Currently Amended) The process as claimed in claim 3, wherein

A in ~~the general~~ formula (XI) is halide, pseudohalide, tetraphenylborate, tetrafluoroborate, tetrachloroborate, hexafluorophosphate, hexafluoroantimonate, tetracarbonylcobaltate, hexafluoroferrate, tetrachloroferrate, tetrachloroaluminate, triflate, bistrifluorosulfonylamide, heptachlorodialuminate, tetrachloropalladate, sulfate, hydrogensulfate, nitrate, nitrite, phosphate, hydrogenphosphate, dihydrogenphosphate, hydroxide, carbonate, hydrogencarbonate, salts of aromatic or aliphatic carboxylic acids, salts of aromatic or aliphatic sulfonic acids or phenoxides.

Claim 6. (Currently Amended) The process as claimed in claim 1, wherein the metal of groups 6 to 10 of the Periodic Table ~~which is used~~ is Ru, Rh, Ni, Pd, or Pt.

Claim 7. (Canceled)

Claim 8. (Currently Amended) The process as claimed in claim 1, wherein one or more embodiments of the compounds of formulas II and/or III ~~to X~~ ~~is used~~ reacted with said metal in a ratio ~~of~~ ranging from 1 to 100 mol amount to the metal of groups 6 to 10 of the Periodic Table.

Claim 9. (Canceled)

Claim 10. (New) A method, comprising:

conducting a hydroformylation, a hydrogenation, an aryl amination, a hydrosilylation, a Heck reaction, a Suzuki coupling, a Kumada coupling, a Stille coupling, a Miyaura coupling, a Sonogashira coupling, an olefin metathesis, a cyclopropanation, a reduction of a haloarene or a polymerization reaction in the presence of a catalyst of a metal complex (I) that is comprised of one or more compounds of formula II and/or III:



wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$  are the same or different and each is a linear, branched, substituted or unsubstituted, cyclic or alicyclic alkyl group having from 1 to 24 carbon atoms; substituted or unsubstituted, mono- or polycyclic aryl groups having from 6 to 24 carbon atoms; mono- or polycyclic, substituted or unsubstituted heterocyclic group having from 6 to 24 carbon atoms; a heteroatom selected from the group consisting of N, O, S, and R<sup>3</sup>;  $R^4$  optionally is part of a covalent bond;

$R^5$ ,  $R^6$ ,  $R^7$  are the same or different and each is hydrogen; a linear, branched, substituted or unsubstituted, cyclic or alicyclic alkyl group having from 1 to 24 carbon atoms; substituted or unsubstituted, mono- or polycyclic aryl group having from 6 to 24 carbon atoms, with the proviso that the  $R^7$  substituent is not hydrogen;

$Y^-$  is a halide, a pseudohalide, tetraphenylborate, tetrafluoroborate, tetrachloroborate, hexafluorophosphate, hexafluoroantimonate, tetracarbonylcobaltate, hexafluoroferrate, tetrachloroferrate, tetrachloroaluminate, triflate, bistrifluorosulfonylamide, heptachlorodialuminate, tetrachloropalladate, sulfate, hydrogensulfate, nitrate, nitrite,

phosphate, hydrogenphosphate, dihydrogenphosphate, hydroxide, carbonate, hydrogencarbonate, salts of aromatic or aliphatic carboxylic acids, salts of aromatic or aliphatic sulfonic acids or phenoxides.

Claim 11. (New) A method of telomerization, comprising:

reacting an olefinic material with a nucleophile in the presence of a catalyst which is the reaction product of Claim 1.

Claim 12. (New) The method of Claim 11, wherein the olefinic material is a conjugated diolefin and the nucleophile is an aliphatic alcohol.